

December 17, 2018

Mr. William F. Durham, Director  
WVDEP - Division of Air Quality  
601 57th Street SE  
Charleston, West Virginia 25304

RE: Title V Permit Application  
Columbia Gas Transmission, LLC  
Lone Oak Compressor Station (Facility ID #: 051-00216)



Dear Mr. Durham,

Attached is an initial Title V permit application for Columbia Gas Transmission's (Columbia) Lone Oak Compressor Station, which is located in Marshall County, West Virginia. The Station was issued Permit to Construct R13-3254A on December 12, 2017. In accordance with 45 CSR 30, this application is being submitted within 12 months after commencing operation.

This package contains the general application forms along with all required attachments for an initial Title V permit application. Per WVDAQ, there is no application fee associated with this application.

The Station's potential to emit (PTE) exceeds 100 tons per year for nitrogen oxides and carbon monoxide; therefore, the Station is considered a Title V source for permitting purposes. The Station's PTE does not exceed Prevention of Significant Deterioration (PSD) applicability thresholds; therefore, the Station is not considered a major PSD source.

Should you have any questions or need additional information, please feel free to contact me at (832) 320 5880 or via email at [shrishti\\_chhabra@transcanada.com](mailto:shrishti_chhabra@transcanada.com).

Sincerely,

A handwritten signature in blue ink, appearing to read "Shrishti Chhabra".

Shrishti Chhabra  
Principal Environmental Engineer

Attachments

APPLICATION FOR 45 CSR 30  
PERMIT TO OPERATE

Columbia Gas Transmission, LLC  
Lone Oak Compressor Station  
Marshall County, West Virginia

December 2018

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General Application Form

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

DIVISION OF AIR QUALITY

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: (304) 926-0475

[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

<b>1. Name of Applicant (As registered with the WV Secretary of State's Office):</b> Columbia Gas		<b>2. Facility Name or Location:</b> Lone Oak Compressor Station	
<b>3. DAQ Plant ID No.:</b>  0 5 1 — 0 0 2 1 6		<b>4. Federal Employer ID No. (FEIN):</b>  3 1 0 8 0 2 4 3 5	
<b>5. Permit Application Type:</b>  <input checked="" type="checkbox"/> Initial Permit                      When did operations commence? MM/DD/YYYY <input type="checkbox"/> Permit Renewal                      What is the expiration date of the existing permit? MM/DD/YYYY <input type="checkbox"/> Update to Initial/Renewal Permit Application			
<b>6. Type of Business Entity:</b>  <input type="checkbox"/> Corporation <input type="checkbox"/> Governmental Agency <input checked="" type="checkbox"/> LLC <input type="checkbox"/> Partnership <input type="checkbox"/> Limited Partnership		<b>7. Is the Applicant the:</b>  <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Both  If the Applicant is not both the owner and operator, please provide the name and address of the other party.  _____  _____  _____	
<b>8. Number of onsite employees:</b>  3			
<b>9. Governmental Code:</b>  <input checked="" type="checkbox"/> Privately owned and operated; 0 <input type="checkbox"/> County government owned and operated; 3 <input type="checkbox"/> Federally owned and operated; 1 <input type="checkbox"/> Municipality government owned and operated; 4 <input type="checkbox"/> State government owned and operated; 2 <input type="checkbox"/> District government owned and operated; 5			
<b>10. Business Confidentiality Claims</b>  Does this application include confidential information (per 45CSR31)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY" guidance.			

<b>11. Mailing Address</b>		
Street or P.O. Box: 1700 MacCorkle Ave, SE		
City: Charleston	State: WV	Zip: 25314-
Telephone Number: (304) 357-2000	Fax Number: (    )    -	

<b>12. Facility Location</b>		
Street: Waynesburg Pike	City: Lone Oak	County: Marshall
UTM Easting: 535.8      km	UTM Northing: 4,414.8      km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
<b>Directions:</b> From the town of Lone Oak, travel south on Waynesburg Pike for approximately 1.7 miles. Compressor Station will be on the left.		
<b>Portable Source?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Is facility located within a nonattainment area?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>If yes, for what air pollutants?</b>
<b>Is facility located within 50 miles of another state?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, name the affected state(s).</b> Ohio Pennsylvania
<b>Is facility located within 100 km of a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>If no, do emissions impact a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>If yes, name the area(s).</b>
<sup>1</sup> Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

<b>13. Contact Information</b>		
<b>Responsible Official:</b> Tracy A. Sparks		<b>Title:</b> Manager of Operations
<b>Street or P.O. Box:</b> 301 Maple Street		
<b>City:</b> Sugar Grove	<b>State:</b> OH	<b>Zip:</b> 43155-
<b>Telephone Number:</b> (740) 746-2252	<b>Fax Number:</b> (   )   -	
<b>E-mail address:</b> tracy_sparks@transcanada.com		
<b>Environmental Contact:</b> Shrishti Chhabra		<b>Title:</b> Principal Env. Engineer
<b>Street or P.O. Box:</b> 700 Louisiana Street, Suite 14104E		
<b>City:</b> Houston	<b>State:</b> TX	<b>Zip:</b> 77002-2700
<b>Telephone Number:</b> (832) 320-5880	<b>Fax Number:</b> (   )   -	
<b>E-mail address:</b> shrishti_chhabra@transcanada.com		
<b>Application Preparer:</b> Jennifer Ehrhardt		<b>Title:</b> Project Manager
<b>Company:</b> AECOM		
<b>Street or P.O. Box:</b> 510 Carnegie Center		
<b>City:</b> Princeton	<b>State:</b> NJ	<b>Zip:</b> 08540-
<b>Telephone Number:</b> (609) 720-2094	<b>Fax Number:</b> (   )   -	
<b>E-mail address:</b> jennifer.ehrhardt@aecom.com		

**14. Facility Description**

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Natural Gas Transmission		486210	4922

**Provide a general description of operations.**

Natural Gas Compressor Station

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

**Section 2: Applicable Requirements**

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS	<input checked="" type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO <sub>x</sub> Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO <sub>x</sub> Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO <sub>2</sub> Trading Program (45CSR41)	

19. Non Applicability Determinations
<p><b>List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.</b></p> <p>40 CFR 60 Subpart Dc - The proposed heaters are less than the 10 MMBtu/hr applicability threshold in 40 CFR 60.40c(a).</p> <p>40 CFR 60 Subpart OOOO - The proposed units are not affected facilities listed under 40 CFR 60.5365.</p>
<input checked="" type="checkbox"/> Permit Shield



**19. Non Applicability Determinations (Continued)** - Attach additional pages as necessary.

**List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.**

☐ Permit Shield

## 20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

- 1) R13-3254A Condition 3.1.4: Do not discharge air pollutants which cause or contribute to an objectionable odor. [45CSR§4-3.1]
- 2) R13-3254A Condition 3.3: Conduct stack tests as required. [45CSR13]
- 3) Facility-wide recordkeeping requirements
- 4) Facility-wide reporting requirements

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 1) R13-3254A Condition 3.4.2: Maintain records of all odor complaints received, any investigation performed in response to such a complaint, and any responsive actions taken. [45CSR4]
- 2) R13-3254A Condition 3.3: Submit a protocol 30 days prior to testing and submit a report of all stack test results within 60 days after test completion. [45CSR13]
- 3) R13-3254A Condition 3.4.1: Maintain records of all information required by the permit for at least five years.
- 4) R13-3254A Condition 3.5.4: Submit a certified emissions statement and pay fees on an annual basis. [45CSR30]

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

**20. Facility-Wide Applicable Requirements (Continued) - Attach additional pages as necessary.**

**List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.**

☐ Permit Shield

**For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Are you in compliance with all facility-wide applicable requirements?** ☐ Yes ☐ No

**If no, complete the Schedule of Compliance Form as ATTACHMENT F.**

## 21. Active Permits/Consent Orders

[illegible]

## 22. Inactive Permits/Obsolete Permit Conditions

[illegible]

**Section 3: Facility-Wide Emissions**

<b>23. Facility-Wide Emissions Summary [Tons per Year]</b>	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	188.64
Nitrogen Oxides (NO <sub>x</sub> )	127.83
Lead (Pb)	1.72E-06
Particulate Matter (PM <sub>2.5</sub> ) <sup>1</sup>	15.16
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	15.16
Total Particulate Matter (TSP)	15.16
Sulfur Dioxide (SO <sub>2</sub> )	1.64
Volatile Organic Compounds (VOC)	27.55
Hazardous Air Pollutants <sup>2</sup>	Potential Emissions
Formaldehyde	1.74
Total HAPs	2.54
Regulated Pollutants other than Criteria and HAP	Potential Emissions

<sup>1</sup>PM<sub>2.5</sub> and PM<sub>10</sub> are components of TSP.  
<sup>2</sup>For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

**Section 4: Insignificant Activities**

<b>24. Insignificant Activities (Check all that apply)</b>	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO <sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.
<input type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input checked="" type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units.  Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:  _____ _____ _____ _____ _____ _____ _____ _____

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.



<b>24. Insignificant Activities (Check all that apply)</b>	
<input type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input type="checkbox"/>	54. Steam vents and safety relief valves.
<input type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input checked="" type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

**Section 5: Emission Units, Control Devices, and Emission Points**

<b>25. Equipment Table</b>
Fill out the <b>Title V Equipment Table</b> and provide it as <b>ATTACHMENT D</b> .
<b>26. Emission Units</b>
For each emission unit listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Emission Unit Form</b> as <b>ATTACHMENT E</b> .
For each emission unit not in compliance with an applicable requirement, fill out a <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b> .
<b>27. Control Devices</b>
For each control device listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Air Pollution Control Device Form</b> as <b>ATTACHMENT G</b> .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as <b>ATTACHMENT H</b> .

## Section 6: Certification of Information

### 28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

#### a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

#### b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

#### Responsible official (type or print)

Name: Tracy Sparks

Title: Manager of Operations

#### Responsible official's signature:

Signature: Tracy A Sparks Signature Date: 12-10-18  
(Must be signed and dated in blue ink)

#### Note: Please check all applicable attachments included with this permit application:

<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

**All of the required forms and additional information can be found and downloaded from, the DEP website at [www.dep.wv.gov/dag](http://www.dep.wv.gov/dag), requested by phone (304) 926-0475, and/or obtained through the mail.**

# Attachment A

## **Area Map**



From the town of Lone Oak, travel south on Waynesburg Pike for approximately 1.7 miles. Compressor Station will be on the left.

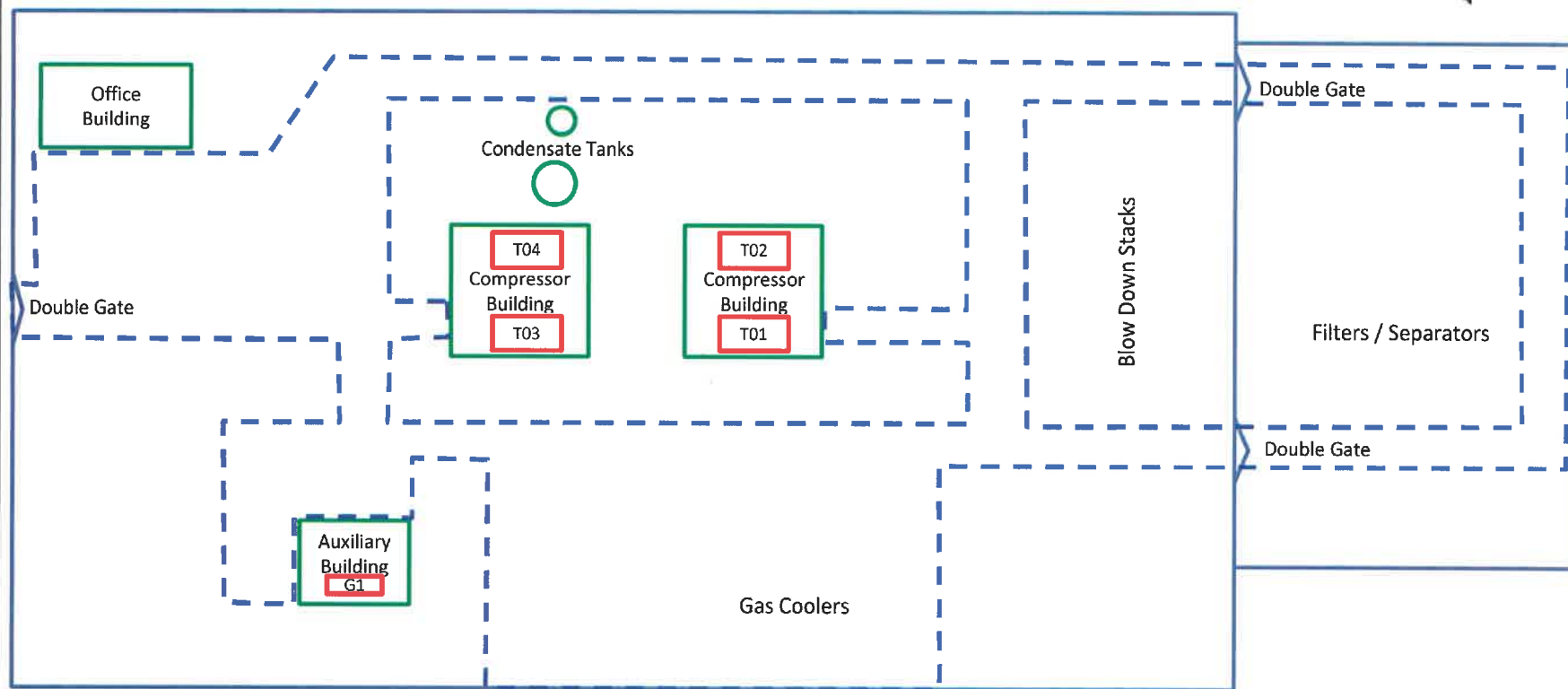
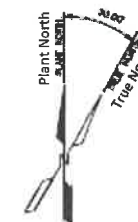
**Attachment A**

Date: December 2018

Facility Map  
Lone Oak Compressor Station

# Attachment B

## **Plot Plan**



- Building Outline
- - - Roadway Outline
- Emission Units
- Fenceline

1" = 100' (approximate)

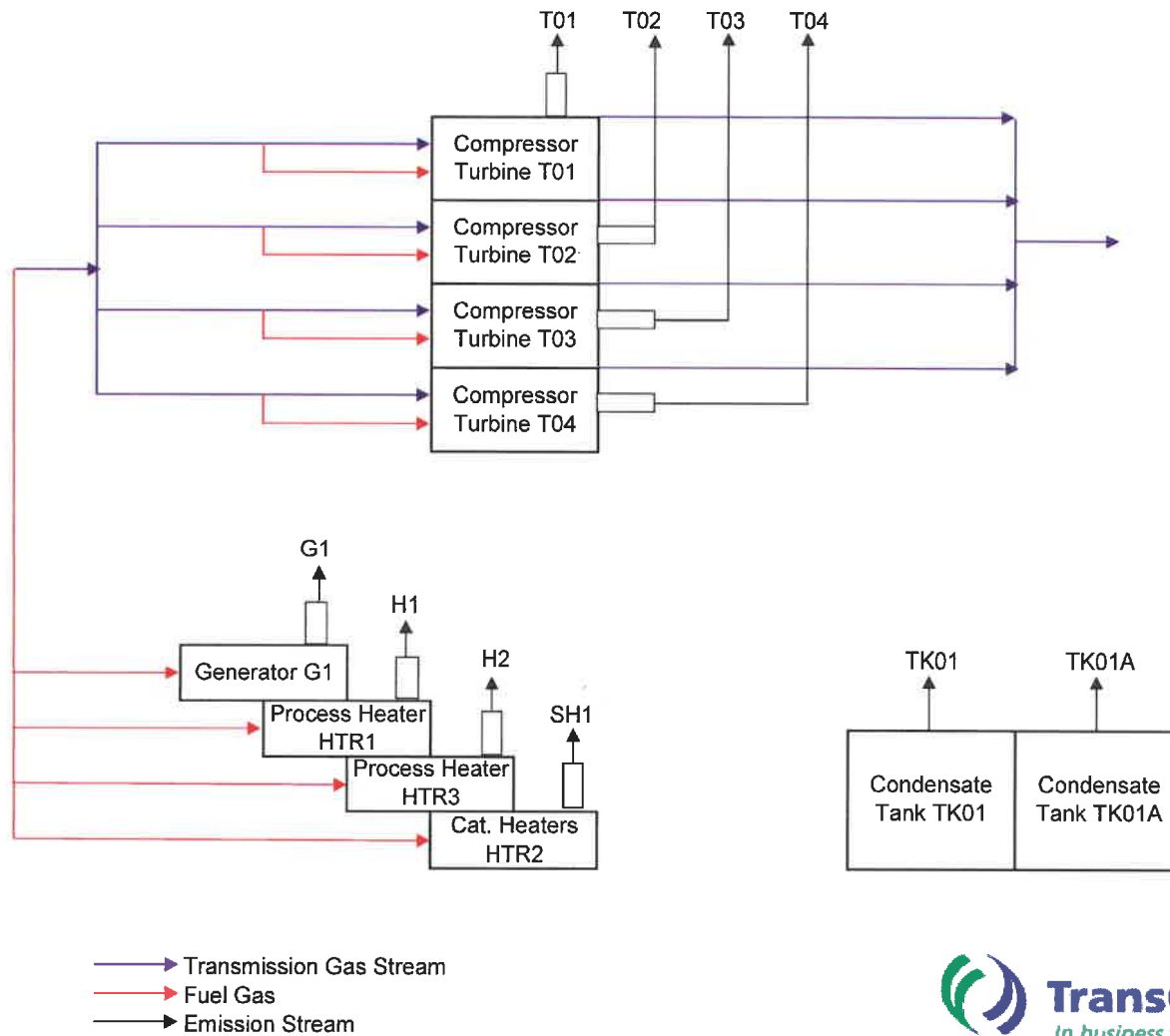
	Attachment B
Date: December 2018	Plot Plan - Lone Oak Compressor Station

# Attachment C

## **Process Flow Diagram**



# **ATTACHMENT C** **LONE OAK COMPRESSOR STATION PROCESS FLOW DIAGRAM**



# Attachment D

## **Equipment Table**

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

Emission Point ID <sup>1</sup>	Control Device <sup>1</sup>	Emission Unit ID <sup>1</sup>	Emission Unit Description	Design Capacity	Year Installed/Modified
T01E	Combustion Controls	T01	Solar Mars 100 Combustion Turbine /Compressor #1	15,339 HP @ 32°F; 16,231 HP @ 0°F	2017
T02E	Combustion Controls	T02	Solar Mars 100 Combustion Turbine /Compressor #2	15,339 HP @ 32°F; 16,231 HP @ 0°F	2017
T03E	Combustion Controls	T03	Solar Mars 100 Combustion Turbine /Compressor #3	15,339 HP @ 32°F; 16,231 HP @ 0°F	2017
T04E	Combustion Controls	T04	Solar Mars 100 Combustion Turbine /Compressor #4	15,339 HP @ 32°F; 16,231 HP @ 0°F	2017
H1	None	HTR1	Process Heater #1 (Natural Gas Fired Unit)	0.40 MMBtu/hr	2017
H3	None	HTR3	Process Heater #3 (Natural Gas Fired Unit)	0.40 MMBtu/hr	2017
G1	None	G1	Waukesha VGF-P48GL reciprocating, SI, 4SLB engine/generator set (Emergency Generator #1)	1,175 HP	2017
SH1	None	HTR2	Forty (40) Catalytic Heaters	40 x 0.072 MMBtu/hr	2017
TK01	None	TK01	Condensate (Pipeline Fluids) Storage Tank	1,000 gal	2017
TK01A	None	TK01A	Condensate (Pipeline Fluids) Storage Tank	500 gal	2017

<sup>1</sup>For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

# Attachment E

## **Emission Unit Forms**

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> T01	<b>Emission unit name:</b> Turbine #1	<b>List any control devices associated with this emission unit:</b> dry-low-NOx (SoLoNOx)	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Natural gas-fired Solar Mars 100 Turbine #1			
<b>Manufacturer:</b> Solar	<b>Model number:</b> Mars 100-16000S	<b>Serial number:</b> .	
<b>Construction date:</b> 12/22/2017 (In service)	<b>Installation date:</b> 12/22/2017 (In service)	<b>Modification date(s):</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 15,339 HP @ 32°F			
<b>Maximum Hourly Throughput:</b> 134,408 scf/hr (Based on 0°F)	<b>Maximum Annual Throughput:</b> 1,115.4 MMscf/yr (Based on 32°F)	<b>Maximum Operating Schedule:</b> 8,760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> ___ Yes <u> X </u> No		<b>If yes, is it?</b> ___ Indirect Fired    ___ Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Max Heat Input: 137.10 MMBtu/hr (HHV, 0 °F) 15,339 HP @ 32°F		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Natural Gas: 134,408 scf/hr (Based on 0°F) ; 1,115.4 MMscf/yr (Based on 32°F)			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains/100 scf	0	1,020 Btu/scf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	7.53	46.62
Nitrogen Oxides (NO <sub>x</sub> )	7.42	31.24
Lead (Pb)	-	-
Particulate Matter (PM <sub>2.5</sub> )	0.90	3.75
Particulate Matter (PM <sub>10</sub> )	0.90	3.75
Total Particulate Matter (TSP)	0.90	3.75
Sulfur Dioxide (SO <sub>2</sub> )	7.83	0.41
Volatile Organic Compounds (VOC)	0.86	3.75
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.10	0.40
Total HAPs	0.14	0.58
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO <sub>2</sub> e	16,054	66,609
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>NO<sub>x</sub>, VOC, and CO: Vendor Data (20% of UHC for VOC)  CO<sub>2</sub>e: 40 CFR 98 Subpart C  PM<sub>2.5</sub>/PM<sub>10</sub>/TSP: AP-42 Table 3.1-2a (4/00)  SO<sub>2</sub>: 0.20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annually)  HAPs: AP-42 Table 3.1-3 (4/00)</p>		

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- (1) 40 CFR 60 Subpart KKKK, §60.4305(a) – Subject to this subpart since the turbine has a heat input  $\geq 10$  MMBtu/hr.
- (2) R13-3254A Condition 4.1.1.a.i,ii,iv: Annual emission limits (tpy): NO<sub>x</sub> – 32.82, CO – 48.4, VOC – 3.73
- (3) R13-3254A Condition 4.1.1.a.i: NO<sub>x</sub> limited to 25 ppm at 15% O<sub>2</sub> or 150 ng/J of useful output (1.2 lb/MWh). When operating at less than 75% peak load or at temperatures less than 0 °F, the limit for NO<sub>x</sub> is 150 ppm at 15% O<sub>2</sub> or 1,100 ng/J of useful output (8.7 lb/MWh). [40 CFR §60.4320]
- (4) R13-3254A Condition 4.1.1.a.iii: SO<sub>2</sub> limited to 0.060 lb of SO<sub>2</sub>/MMBtu heat input. [40 CFR §60.4330(a)(2)]

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- (1) R13-3254A Condition 4.5.1: Submit an initial notification within 15 days after start-up. [40 CFR §60.7(a)(3)]
- (2) R13-3254A Conditions 4.2.1, 4.4.4: Maintain records of the monthly operating hours for normal, low- load, low-temperature, and startup/shutdown operation. Calculate monthly emissions and keep in a rolling 12-month format.
- (2),(3) R13-3254A Conditions 4.3.1: Conduct an initial performance test for NO<sub>x</sub> within 60 days after achieving maximum output of the turbine, but no later than 180 days after initial startup. Conduct subsequent performance tests annually. This frequency can be reduced to every two years if the results demonstrate the turbine achieved compliance of  $\leq 75\%$  of the NO<sub>x</sub> emission limit. Maintain records of performance tests. Submit copy of performance test within 60 days of test completion. [40 CFR §60.8, §60.4340(a), §60.4375(b), §60.4400]
- (4) R13-3254A Condition 4.4.5: Maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 scf. [40 CFR §60.4365(a)]

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> T02	<b>Emission unit name:</b> Turbine #2	<b>List any control devices associated with this emission unit:</b> dry-low-NOx (SoLoNOx)	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Natural gas-fired Solar Mars 100 Turbine #2			
<b>Manufacturer:</b> Solar	<b>Model number:</b> Mars 100-16000S	<b>Serial number:</b>	
<b>Construction date:</b> 8/22/2018 (In service)	<b>Installation date:</b> 8/22/2018 (In service)	<b>Modification date(s):</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 15,339 HP @ 32°F			
<b>Maximum Hourly Throughput:</b> 134,408 scf/hr (Based on 0°F)	<b>Maximum Annual Throughput:</b> 1,115.4 MMscf/yr (Based on 32°F)	<b>Maximum Operating Schedule:</b> 8,760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> ___ Yes <u>X</u> No		<b>If yes, is it?</b> ___ Indirect Fired    ___ Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Max Heat Input: 137.10 MMBtu/hr (HHV, 0 °F) 15,339 HP @ 32°F		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Natural Gas: 134,408 scf/hr (Based on 0°F) ; 1,115.4 MMscf/yr (Based on 32°F)			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains/100 scf	0	1,020 Btu/scf



<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	7.53	46.62
Nitrogen Oxides (NO <sub>x</sub> )	7.42	31.24
Lead (Pb)	-	-
Particulate Matter (PM <sub>2.5</sub> )	0.90	3.75
Particulate Matter (PM <sub>10</sub> )	0.90	3.75
Total Particulate Matter (TSP)	0.90	3.75
Sulfur Dioxide (SO <sub>2</sub> )	7.83	0.41
Volatile Organic Compounds (VOC)	0.86	3.75
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.10	0.40
Total HAPs	0.14	0.58
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO <sub>2</sub> e	16,054	66,609
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>NO<sub>x</sub>, VOC, and CO: Vendor Data (20% of UHC for VOC)  CO<sub>2</sub>e: 40 CFR 98 Subpart C  PM<sub>2.5</sub>/PM<sub>10</sub>/TSP: AP-42 Table 3.1-2a (4/00)  SO<sub>2</sub>: 0.20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annually)  HAPs: AP-42 Table 3.1-3 (4/00)</p>		

**Applicable Requirements**

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

- (1) 40 CFR 60 Subpart KKKK, §60.4305(a) – Subject to this subpart since the turbine has a heat input  $\geq 10$  MMBtu/hr.
- (2) R13-3254A Condition 4.1.1.a.i,ii,iv: Annual emission limits (tpy): NO<sub>x</sub> – 32.82, CO – 48.4, VOC – 3.73
- (3) R13-3254A Condition 4.1.1.a.i: NO<sub>x</sub> limited to 25 ppm at 15% O<sub>2</sub> or 150 ng/J of useful output (1.2 lb/MWh). When operating at less than 75% peak load or at temperatures less than 0 °F, the limit for NO<sub>x</sub> is 150 ppm at 15% O<sub>2</sub> or 1,100 ng/J of useful output (8.7 lb/MWh). [40 CFR §60.4320]
- (4) R13-3254A Condition 4.1.1.a.iii: SO<sub>2</sub> limited to 0.060 lb of SO<sub>2</sub>/MMBtu heat input. [40 CFR §60.4330(a)(2)]

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

- (1) R13-3254A Condition 4.5.1: Submit an initial notification within 15 days after start-up. [40 CFR §60.7(a)(3)]
- (2) R13-3254A Conditions 4.2.1, 4.4.4: Maintain records of the monthly operating hours for normal, low- load, low-temperature, and startup/shutdown operation. Calculate monthly emissions and keep in a rolling 12-month format.
- (2),(3) R13-3254A Conditions 4.3.1: Conduct an initial performance test for NO<sub>x</sub> within 60 days after achieving maximum output of the turbine, but no later than 180 days after initial startup. Conduct subsequent performance tests annually. This frequency can be reduced to every two years if the results demonstrate the turbine achieved compliance of  $\leq 75\%$  of the NO<sub>x</sub> emission limit. Maintain records of performance tests. Submit copy of performance test within 60 days of test completion. [40 CFR §60.8, §60.4340(a), §60.4375(b), §60.4400]
- (4) R13-3254A Condition 4.4.5: Maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 scf. [40 CFR §60.4365(a)]

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> T03	<b>Emission unit name:</b> Turbine #3	<b>List any control devices associated with this emission unit:</b> dry-low-NOx (SoLoNOx)
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**  
Natural gas-fired Solar Mars 100 Turbine #3

<b>Manufacturer:</b> Solar	<b>Model number:</b> Mars 100-16000S	<b>Serial number:</b>
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<b>Construction date:</b> 1/3/2018 (In service)	<b>Installation date:</b> 1/3/2018 (In service)	<b>Modification date(s):</b> N/A
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**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
15,339 HP @ 32°F

<b>Maximum Hourly Throughput:</b> 134,408 scf/hr (Based on 0°F)	<b>Maximum Annual Throughput:</b> 1,115.4 MMscf/yr (Based on 32°F)	<b>Maximum Operating Schedule:</b> 8,760 hr/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> ___ Yes <u>X</u> No	<b>If yes, is it?</b> ___ Indirect Fired    ___ Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> Max Heat Input: 137.10 MMBtu/hr (HHV, 0 °F) 15,339 HP @ 32°F	<b>Type and Btu/hr rating of burners:</b>
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Natural Gas: 134,408 scf/hr (Based on 0°F) ; 1,115.4 MMscf/yr (Based on 32°F)

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains/100 scf	0	1,020 Btu/scf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	7.53	46.62
Nitrogen Oxides (NO <sub>x</sub> )	7.42	31.24
Lead (Pb)	-	-
Particulate Matter (PM <sub>2.5</sub> )	0.90	3.75
Particulate Matter (PM <sub>10</sub> )	0.90	3.75
Total Particulate Matter (TSP)	0.90	3.75
Sulfur Dioxide (SO <sub>2</sub> )	7.83	0.41
Volatile Organic Compounds (VOC)	0.86	3.75
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.10	0.40
Total HAPs	0.14	0.58
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO <sub>2</sub> e	16,054	66,609
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>NO<sub>x</sub>, VOC, and CO: Vendor Data (20% of UHC for VOC)  CO<sub>2</sub>e: 40 CFR 98 Subpart C  PM<sub>2.5</sub>/PM<sub>10</sub>/TSP: AP-42 Table 3.1-2a (4/00)  SO<sub>2</sub>: 0.20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annually)  HAPs: AP-42 Table 3.1-3 (4/00)</p>		

**Applicable Requirements**

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

- (1) 40 CFR 60 Subpart KKKK, §60.4305(a) – Subject to this subpart since the turbine has a heat input  $\geq 10$  MMBtu/hr.
- (2) R13-3254A Condition 4.1.1.a.i,ii,iv: Annual emission limits (tpy): NO<sub>x</sub> – 32.82, CO – 48.4, VOC – 3.73
- (3) R13-3254A Condition 4.1.1.a.i: NO<sub>x</sub> limited to 25 ppm at 15% O<sub>2</sub> or 150 ng/J of useful output (1.2 lb/MWh). When operating at less than 75% peak load or at temperatures less than 0 °F, the limit for NO<sub>x</sub> is 150 ppm at 15% O<sub>2</sub> or 1,100 ng/J of useful output (8.7 lb/MWh). [40 CFR §60.4320]
- (4) R13-3254A Condition 4.1.1.a.iii: SO<sub>2</sub> limited to 0.060 lb of SO<sub>2</sub>/MMBtu heat input. [40 CFR §60.4330(a)(2)]

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

- (1) R13-3254A Condition 4.5.1: Submit an initial notification within 15 days after start-up. [40 CFR §60.7(a)(3)]
- (2) R13-3254A Conditions 4.2.1, 4.4.4: Maintain records of the monthly operating hours for normal, low- load, low-temperature, and startup/shutdown operation. Calculate monthly emissions and keep in a rolling 12-month format.
- (2),(3) R13-3254A Conditions 4.3.1: Conduct an initial performance test for NO<sub>x</sub> within 60 days after achieving maximum output of the turbine, but no later than 180 days after initial startup. Conduct subsequent performance tests annually. This frequency can be reduced to every two years if the results demonstrate the turbine achieved compliance of  $\leq 75\%$  of the NO<sub>x</sub> emission limit. Maintain records of performance tests. Submit copy of performance test within 60 days of test completion. [40 CFR §60.8, §60.4340(a), §60.4375(b), §60.4400]
- (4) R13-3254A Condition 4.4.5: Maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 scf. [40 CFR §60.4365(a)]

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

## ATTACHMENT E - Emission Unit Form

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> T04	<b>Emission unit name:</b> Turbine #4	<b>List any control devices associated with this emission unit:</b> dry-low-NOx (SoLoNOx)	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Natural gas-fired Solar Mars 100 Turbine #4			
<b>Manufacturer:</b> Solar	<b>Model number:</b> Mars 100-16000S	<b>Serial number:</b>	
<b>Construction date:</b> 12/22/2017 (In service)	<b>Installation date:</b> 12/22/2017 (In service)	<b>Modification date(s):</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 15,339 HP @ 32°F			
<b>Maximum Hourly Throughput:</b> 134,408 scf/hr (Based on 0°F)	<b>Maximum Annual Throughput:</b> 1,115.4 MMscf/yr (Based on 32°F)	<b>Maximum Operating Schedule:</b> 8,760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> ___ Yes <u>X</u> No		<b>If yes, is it?</b> ___ Indirect Fired    ___ Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Max Heat Input: 137.10 MMBtu/hr (HHV, 0 °F) 15,339 HP @ 32°F		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Natural Gas: 134,408 scf/hr (Based on 0°F) ; 1,115.4 MMscf/yr (Based on 32°F)			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains/100 scf	0	1,020 Btu/scf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	7.53	46.62
Nitrogen Oxides (NO <sub>x</sub> )	7.42	31.24
Lead (Pb)	-	-
Particulate Matter (PM <sub>2.5</sub> )	0.90	3.75
Particulate Matter (PM <sub>10</sub> )	0.90	3.75
Total Particulate Matter (TSP)	0.90	3.75
Sulfur Dioxide (SO <sub>2</sub> )	7.83	0.41
Volatile Organic Compounds (VOC)	0.86	3.75
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.10	0.40
Total HAPs	0.14	0.58
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO <sub>2</sub> e	16,054	66,609
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>NO<sub>x</sub>, VOC, and CO: Vendor Data (20% of UHC for VOC)  CO<sub>2</sub>e: 40 CFR 98 Subpart C  PM<sub>2.5</sub>/PM<sub>10</sub>/TSP: AP-42 Table 3.1-2a (4/00)  SO<sub>2</sub>: 0.20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annually)  HAPs: AP-42 Table 3.1-3 (4/00)</p>		

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- (1) 40 CFR 60 Subpart KKKK, §60.4305(a) – Subject to this subpart since the turbine has a heat input  $\geq 10$  MMBtu/hr.
- (2) R13-3254A Condition 4.1.1.a.i,ii,iv: Annual emission limits (tpy): NO<sub>x</sub> – 32.82, CO – 48.4, VOC – 3.73
- (3) R13-3254A Condition 4.1.1.a.i: NO<sub>x</sub> limited to 25 ppm at 15% O<sub>2</sub> or 150 ng/J of useful output (1.2 lb/MWh). When operating at less than 75% peak load or at temperatures less than 0 °F, the limit for NO<sub>x</sub> is 150 ppm at 15% O<sub>2</sub> or 1,100 ng/J of useful output (8.7 lb/MWh). [40 CFR §60.4320]
- (4) R13-3254A Condition 4.1.1.a.iii: SO<sub>2</sub> limited to 0.060 lb of SO<sub>2</sub>/MMBtu heat input. [40 CFR §60.4330(a)(2)]

\_\_\_\_ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- (1) R13-3254A Condition 4.5.1: Submit an initial notification within 15 days after start-up. [40 CFR §60.7(a)(3)]
- (2) R13-3254A Conditions 4.2.1, 4.4.4: Maintain records of the monthly operating hours for normal, low- load, low-temperature, and startup/shutdown operation. Calculate monthly emissions and keep in a rolling 12-month format.
- (2),(3) R13-3254A Conditions 4.3.1: Conduct an initial performance test for NO<sub>x</sub> within 60 days after achieving maximum output of the turbine, but no later than 180 days after initial startup. Conduct subsequent performance tests annually. This frequency can be reduced to every two years if the results demonstrate the turbine achieved compliance of  $\leq 75\%$  of the NO<sub>x</sub> emission limit. Maintain records of performance tests. Submit copy of performance test within 60 days of test completion. [40 CFR §60.8, §60.4340(a), §60.4375(b), §60.4400]
- (4) R13-3254A Condition 4.4.5: Maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 scf. [40 CFR §60.4365(a)]

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.



## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> G1	<b>Emission unit name:</b> Emergency Generator	<b>List any control devices associated with this emission unit:</b> None
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**  
Natural gas-fired Waukesha VGF-P48GL Emergency Generator

<b>Manufacturer:</b> Waukesha	<b>Model number:</b> VGF-P48GL	<b>Serial number:</b>
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<b>Construction date:</b> 12/20/2017 (In service)	<b>Installation date:</b> 12/20/2017 (In service)	<b>Modification date(s):</b> N/A
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**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
1,175 HP

<b>Maximum Hourly Throughput:</b> 8,908 scf/hr	<b>Maximum Annual Throughput:</b> 4.45 MMscf/yr	<b>Maximum Operating Schedule:</b> 500 hr/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> ___ Yes <u> X </u> No	<b>If yes, is it?</b>  ___ Indirect Fired    ___ Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> 9.09 MMBtu/hr 1,175 HP	<b>Type and Btu/hr rating of burners:</b>
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**  
Natural gas: 8,908 scf/hr; 4.45 MMscf/yr

### **Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains/100 scf	0	1,020 Btu/scf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.37	0.84
Nitrogen Oxides (NO <sub>x</sub> )	5.18	1.30
Lead (Pb)	-	-
Particulate Matter (PM <sub>2.5</sub> )	0.09	0.02
Particulate Matter (PM <sub>10</sub> )	0.09	0.02
Total Particulate Matter (TSP)	0.09	0.02
Sulfur Dioxide (SO <sub>2</sub> )	0.52	1.62E-03
Volatile Organic Compounds (VOC)	0.10	0.03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.48	0.12
Total HAPs	0.66	0.16
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO <sub>2</sub> e	1,064	266
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>NO<sub>x</sub>, CO, VOC: Vendor Data (assumed VOC = NMNEHC)  CO<sub>2</sub>e: 40 CFR 98 Subpart C  PM 2.5/PM10/TSP and HAPs: AP-42 Table 3.2-2 (7/00) - 4SLB  SO<sub>2</sub>: 20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annual)</p>		

**Applicable Requirements**

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- (1) Comply with 40 CFR 63 Subpart ZZZZ
- (2) R13-3254A Condition 4.1.3.c: Operating hours in non-emergency situations limited to a maximum of 100 hours per year.
- (3) R13-3254A Condition 4.1.3.a: NO<sub>x</sub> emissions shall not exceed 2.0 g/hp-hr or 160 ppmvd at 15% O<sub>2</sub>. CO emissions shall not exceed 4.0 g/hp-hr or 540 ppmvd at 15% O<sub>2</sub>. VOC emissions shall not exceed 1.0 g/hp-hr or 86 ppmvd at 15% O<sub>2</sub> (excluding CH<sub>2</sub>O emissions). [40 CFR §60.4233(e), Table 1]
- (4) 40 CFR 60 Subpart JJJJ work practice standards

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- (1) 40 CFR 63 Subpart ZZZZ; §63.6590(c)(1): Comply with NESHAP Subpart ZZZZ by complying with NSPS Subpart JJJJ.
- (2) R13-3254A Condition 4.2.2: Maintain records of hours of operation including how many hours are spent for emergency operation, what classified the operation as an emergency, hours spent for non-emergency operation, and reason for non-emergency operation. [40 CFR §60.4245(b)]
- (2) R13-3254A Condition 4.1.3.d: Install a non-resettable hour meter. [40 CFR §60.4237(a)]
- (3) R13-3254A Condition 4.3.2: Conduct an initial performance test and subsequent performance tests every 8,760 hours of operation or 3 years, whichever comes first. Submit a copy of the performance test within 60 days after test completion. [40 CFR §60.4243(b), §60.4245(d)]
- (4) R13-3254A Condition 4.1.3.e: Keep a maintenance plan and records of conducted maintenance as well as all notifications submitted. [40 CFR §60.4245(a)]

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> HTR1	<b>Emission unit name:</b> Process Heater #1	<b>List any control devices associated with this emission unit:</b> None	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Natural Gas-fired Process Heater #1			
<b>Manufacturer:</b>	<b>Model number:</b>	<b>Serial number:</b>	
<b>Construction date:</b> 12/20/2017 (In service)	<b>Installation date:</b> 12/20/2017 (In service)	<b>Modification date(s):</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 0.40 MMBtu/hr			
<b>Maximum Hourly Throughput:</b> 392 scf/hr	<b>Maximum Annual Throughput:</b> 3.44 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b> <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> Max Heat Input: 0.40 MMBtu/hr		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Natural Gas: 392 scf/hr; 3.44 MMscf/yr			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains/100 scf	0	1,020 Btu/scf

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.03	0.14
Nitrogen Oxides (NO <sub>x</sub> )	0.04	0.17
Lead (Pb)	1.96E-07	8.59E-07
Particulate Matter (PM <sub>2.5</sub> )	2.98E-03	0.01
Particulate Matter (PM <sub>10</sub> )	2.98E-03	0.01
Total Particulate Matter (TSP)	2.98E-03	0.01
Sulfur Dioxide (SO <sub>2</sub> )	0.02	1.25E-03
Volatile Organic Compounds (VOC)	2.16E-03	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	2.94E-05	1.29E-04
Total HAPs	7.41E-04	3.24E-03
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO <sub>2</sub> e	47	205
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>NO<sub>x</sub> and CO: AP-42 Table 1.4-1 (7/98)  CO<sub>2</sub>e: 40 CFR 98 Subpart C  PM 2.5/PM10/TSP, Pb, and VOC: AP-42 Table 1.4-2 (7/98)  SO<sub>2</sub>: 20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annual)  HAPs: AP-42 Table 1.4-3 &amp; 4 (7/98)</p>		

***Applicable Requirements***

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- (1) R13-3254A Condition 4.1.2: Annual emission limits (tpy): NO<sub>x</sub> – 0.17; CO – 0.14

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

- (1) R13-3254A Condition 4.2.3: Maintain records of the amount of fuel consumed on a monthly basis.

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> HTR3	<b>Emission unit name:</b> Process Heater #3	<b>List any control devices associated with this emission unit:</b> None
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**  
 Natural Gas-fired Process Heater #3

<b>Manufacturer:</b>	<b>Model number:</b>	<b>Serial number:</b>
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<b>Construction date:</b> 12/20/2017 (In service)	<b>Installation date:</b> 12/20/2017 (In service)	<b>Modification date(s):</b> N/A
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**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
 0.40 MMBtu/hr

<b>Maximum Hourly Throughput:</b> 392 scf/hr	<b>Maximum Annual Throughput:</b> 3.44 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hr/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, is it?</b>  <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> Max Heat Input: 0.40 MMBtu/hr	<b>Type and Btu/hr rating of burners:</b>
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**  
 Natural Gas: 392 scf/hr; 3.44 MMscf/yr

### **Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains/100 scf	0	1,020 Btu/scf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.03	0.14
Nitrogen Oxides (NO <sub>x</sub> )	0.04	0.17
Lead (Pb)	1.96E-07	8.59E-07
Particulate Matter (PM <sub>2.5</sub> )	2.98E-03	0.01
Particulate Matter (PM <sub>10</sub> )	2.98E-03	0.01
Total Particulate Matter (TSP)	2.98E-03	0.01
Sulfur Dioxide (SO <sub>2</sub> )	0.02	1.25E-03
Volatile Organic Compounds (VOC)	2.16E-03	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	2.94E-05	1.29E-04
Total HAPs	7.41E-04	3.24E-03
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO <sub>2</sub> e	47	205
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>NO<sub>x</sub> and CO: AP-42 Table 1.4-1 (7/98)  CO<sub>2</sub>e: 40 CFR 98 Subpart C  PM 2.5/PM<sub>10</sub>/TSP, Pb, and VOC: AP-42 Table 1.4-2 (7/98)  SO<sub>2</sub>: 20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annual)  HAPs: AP-42 Table 1.4-3 &amp; 4 (7/98)</p>		



***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

- (1) R13-3254A Condition 4.1.2: Annual emission limits (tpy): NOx – 0.17; CO – 0.14

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

- (1) R13-3254A Condition 4.2.3: Maintain records of the amount of fuel consumed on a monthly basis.

**Are you in compliance with all applicable requirements for this emission unit?   X   Yes        No**

**If no, complete the Schedule of Compliance Form as ATTACHMENT F.**

## ATTACHMENT E - Emission Unit Form

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> HTR2	<b>Emission unit name:</b> Catalytic Heaters	<b>List any control devices associated with this emission unit:</b>  None	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> 40 Natural Gas-fired Catalytic Heaters - 40 x 0.072 MMBtu/hr			
<b>Manufacturer:</b>	<b>Model number:</b>	<b>Serial number:</b>	
<b>Construction date:</b> 12/20/2017 (In service)	<b>Installation date:</b> 12/20/2017 (In service)	<b>Modification date(s):</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 40 x 0.72 MMBtu/hr			
<b>Maximum Hourly Throughput:</b> 2,824 scf/hr	<b>Maximum Annual Throughput:</b> 24.73 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, is it?</b>  <input checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 40 x 0.072 MMBtu/hr		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b> Natural Gas: 2,824 scf/hr; 24.73 MMscf/yr			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 grains/100 scf	0	1,020 Btu/scf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.24	1.04
Nitrogen Oxides (NO <sub>x</sub> )	0.28	1.24
Lead (Pb)	1.41E-06	6.18E-06
Particulate Matter (PM <sub>2.5</sub> )	0.02	0.09
Particulate Matter (PM <sub>10</sub> )	0.02	0.09
Total Particulate Matter (TSP)	0.02	0.09
Sulfur Dioxide (SO <sub>2</sub> )	0.16	9.01E-03
Volatile Organic Compounds (VOC)	0.02	0.07
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	2.12E-04	9.28E-04
Total HAPs	5.33E-03	0.02
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO <sub>2</sub> e	337	1,477
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>NO<sub>x</sub> and CO: AP-42 Table 1.4-1 (7/98)  CO<sub>2</sub>e: 40 CFR 98 Subpart C  PM 2.5/PM10/TSP, Pb, and VOC: AP-42 Table 1.4-2 (7/98)  SO<sub>2</sub>: 20 grains S/100 scf (hourly); 0.25 grains S/100 scf (annual)  HAPs: AP-42 Table 1.4-3 &amp; 4 (7/98)</p>		

***Applicable Requirements***

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- (1) Smoke and/or particulate matter emitted into the open air must not be greater than 10% opacity based on a six-minute block average. [45CSR§2-3.1]

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

- (1) When requested, conduct Method 9 emission observations. [45CSR§2-3.2]

Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> TK01	<b>Emission unit name:</b> Condensate (Pipeline Fluids) Storage Tank	<b>List any control devices associated with this emission unit:</b> None
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**  
1,000 gallon condensate (pipeline fluids) storage tank

<b>Manufacturer:</b> N/A	<b>Model number:</b> N/A	<b>Serial number:</b> N/A
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<b>Construction date:</b> 01/01/2018 (In service)	<b>Installation date:</b> 01/01/2018 (In service)	<b>Modification date(s):</b> N/A
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**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
1,000 gal

<b>Maximum Hourly Throughput:</b>	<b>Maximum Annual Throughput:</b> 12,000 gal (12 turnovers)	<b>Maximum Operating Schedule:</b> 8,760 hr/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> ___ Yes <u>X</u> No	<b>If yes, is it?</b> ___ Indirect Fired    ___ Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b>	<b>Type and Btu/hr rating of burners:</b>
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	-	-
Nitrogen Oxides (NO <sub>x</sub> )	-	-
Lead (Pb)	-	-
Particulate Matter (PM <sub>2.5</sub> )	-	-
Particulate Matter (PM <sub>10</sub> )	-	-
Total Particulate Matter (TSP)	-	-
Sulfur Dioxide (SO <sub>2</sub> )	-	-
Volatile Organic Compounds (VOC)	0.003	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

AP-42 Chapter 7.1 equations

***Applicable Requirements***

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- (1) R13-3254A Condition 4.2.4 – 40 CFR 63.5410a(h)

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

- (1) R13-3254A Condition 4.2.4 – 40 CFR 63.5410a(h) – Submit condensate production data for first 30 days in service and calculate potential VOC emissions.

Are you in compliance with all applicable requirements for this emission unit? \_\_\_\_Yes \_\_\_\_No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> TK01A	<b>Emission unit name:</b> Condensate (Pipeline Fluids) Storage Tank	<b>List any control devices associated with this emission unit:</b> None	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> 500 gallon condensate (pipeline fluids) storage tank			
<b>Manufacturer:</b> N/A	<b>Model number:</b> N/A	<b>Serial number:</b> N/A	
<b>Construction date:</b> 01/01/2018 (In service)	<b>Installation date:</b> 01/01/2018 (In service)	<b>Modification date(s):</b> N/A	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 500 gal			
<b>Maximum Hourly Throughput:</b>	<b>Maximum Annual Throughput:</b> 6,000 gal (12 turnovers)	<b>Maximum Operating Schedule:</b> 8,760 hr/yr	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> ___ Yes <u> X </u> No		<b>If yes, is it?</b> ___ Indirect Fired    ___ Direct Fired	
<b>Maximum design heat input and/or maximum horsepower rating:</b>		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value



<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	-	-
Nitrogen Oxides (NO <sub>x</sub> )	-	-
Lead (Pb)	-	-
Particulate Matter (PM <sub>2.5</sub> )	-	-
Particulate Matter (PM <sub>10</sub> )	-	-
Total Particulate Matter (TSP)	-	-
Sulfur Dioxide (SO <sub>2</sub> )	-	-
Volatile Organic Compounds (VOC)	0.001	0.006
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>AP-42 Chapter 7.1 equations</p>		

***Applicable Requirements***

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- (1) R13-3254A Condition 4.2.4 – 40 CFR 63.5410a(h)

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

- (1) R13-3254A Condition 4.2.4 – 40 CFR 63.5410a(h) – Submit condensate production data for first 30 days in service and calculate potential VOC emissions.

Are you in compliance with all applicable requirements for this emission unit?        Yes        No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

# **Supplemental Attachment:**

## **Supporting Emissions Calculations**

Columbia Gas Transmission, LLC  
Lone Oak Compressor Station

Facility Total PTE

Source	Annual Emissions (tpy)						
	NO <sub>x</sub>	CO	PM <sub>10</sub> /PM <sub>2.5</sub>	VOC	SO <sub>2</sub>	CH <sub>2</sub> O	Total HAP
Solar Mars 100 Turbine #1	31.24	46.62	3.75	3.75	0.41	0.40	0.58
Solar Mars 100 Turbine #2	31.24	46.62	3.75	3.75	0.41	0.40	0.58
Solar Mars 100 Turbine #3	31.24	46.62	3.75	3.75	0.41	0.40	0.58
Solar Mars 100 Turbine #4	31.24	46.62	3.75	3.75	0.41	0.40	0.58
Emergency Generator	1.30	0.84	0.02	0.03	1.62E-03	0.12	0.16
Line Heater #1	0.17	0.14	1.31E-02	9.45E-03	1.25E-03	1.29E-04	3.24E-03
Line Heater #3	0.17	0.14	1.31E-02	9.45E-03	1.25E-03	1.29E-04	3.24E-03
(40) Catalytic Heaters	1.24	1.04	0.09	0.07	9.01E-03	9.28E-04	0.02
Condensate Tank (1,000 gal)				0.01			3.18E-03
Condensate Tank (500 gal)				5.84E-03			1.56E-03
Equipment Leaks (fugitive emissions) <sup>1</sup>				0.80			
Venting				12.41			
<b>Facility PTE<sup>2</sup></b>	127.83	188.64	15.16	27.55	1.64	1.74	2.54
<b>Title V Threshold</b>	100	100	100	100	100	10	25
<b>PSD Applicability Threshold</b>	250	250	250	250	250	--	--

1. Fugitive emissions are not part of the PSD or Title V applicability analyses.

2. Excludes fugitive emissions (compressor stations are not one of the named source categories that include fugitive emissions).

**Columbia Gas Transmission, LLC  
Lone Oak Compressor Station**

**Solar Mars 100 Turbines**

Horsepower	15,339 hp (32 °F)
Brake Specific Fuel Consumption	7,628 Btu/Bhp-hr (LHV, 32 °F)
Total Heat Input	117.00 MMBtu/hr (LHV, 32 °F)
	129.87 MMBtu/hr (HHV, 32 °F) <sup>3</sup>
Maximum Heat Input (at 0 °F)	123.51 MMBtu/hr (LHV, 0 °F)
	137.10 MMBtu/hr (HHV, 0 °F) <sup>3</sup>
Operating Hours	8,760 hr/yr
Natural Gas Heat Content	1,020 Btu/scf
Fuel Consumption	1,115.35 MMscf/yr (based on 32 °F)
	134,408 scf/hr (based on 0 °F)
Quantity	4

Pollutant	Emission Factor		Emission Rate			Emission Factor Reference
	ppmvd@15%O <sub>2</sub>	lb/MMBtu	lb/hr <sup>1</sup>	ton/yr <sup>2</sup>	ton/yr (4 turbines)	
NO <sub>x</sub>	15.00	0.060 LHV	7.42	31.24	124.95	Vendor Data
CO	25.00	0.061 LHV	7.53	46.62	186.47	Vendor Data
PM <sub>10</sub>		0.0066 HHV	0.90	3.75	15.02	AP-42 Table 3.1-2a (4/00)
PM <sub>2.5</sub>		0.0066 HHV	0.90	3.75	15.02	AP-42 Table 3.1-2a (4/00)
VOC	5.00	0.007 LHV	0.86	3.75	15.01	Vendor Data (20% of UHC) <sup>4</sup>
SO <sub>2</sub> (Maximum Hourly)		0.0571 HHV	7.83			20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714 HHV		0.41	1.62	0.25 grains S / 100 scf
Formaldehyde		0.00071 HHV	0.10	0.40	1.62	AP-42 Table 3.1-3 (4/00)
Total HAPs		0.00103 HHV	0.14	0.58	2.34	AP-42 Table 3.1-3 (4/00)

1. Maximum hourly emission rate based on 0 °F.
2. Annual emission rate based on combination of potential operating modes as provided on following page for NO<sub>x</sub>, CO, and VOC.  
All other pollutants based on horsepower and brake specific fuel consumption.
3. HHV heat input based on HHV=1.11\*LHV
4. VOC based on 20% of vendor data for unburned hydrocarbon (UHC).

**Columbia Gas Transmission, LLC  
Lone Oak Compressor Station**

**Solar Mars 100 - Vendor Supplied Emission Rates**

Operating Mode	Units	NO <sub>x</sub>	CO	VOC
Normal Load @ 32 °F <sup>1</sup>	lb/hr	7.02	7.12	0.82
Low Temp (<0 to -20 °F) <sup>2</sup>	lb/hr	21.33	30.91	1.77
Very Low Temp (<-20 °F) <sup>2</sup>	lb/hr	60.93	46.36	1.77
Low-Load (<50%) <sup>3</sup>	lb/hr	16.10	653.41	7.47
Startup/ Shutdown <sup>4</sup>	lb/event	3.10	272.7	3.12

1. Based on data from Solar Mars 100 Compressor Set data sheet and the following concentrations:  
15 ppm NO<sub>x</sub>; 25 ppm CO; 5 ppm VOC
2. Based on data from Solar Product Information Letter (PIL) 167
3. Based on data provided by Solar for 40% load
4. Based on data from Solar PIL170

**Potential Annual Emissions Per Turbine**

Operating Mode	Operating Time		NO <sub>x</sub>	CO	VOC
	Cycles	hr/yr	ton/yr	ton/yr	ton/yr
Normal Load @ 32 °F		8668	30.43	30.86	3.54
Low Temp (<0 to -20 °F)		50	0.53	0.77	0.04
Very Low Temp (<-20 °F)		0	0.00	0.00	0.00
Low-Load (<50%)		25	0.20	8.17	0.09
Startup/ Shutdown	50	17	0.08	6.82	0.08
<b>Total</b>		8,760	31.24	46.62	3.75

**Columbia Gas Transmission, LLC  
Lone Oak Compressor Station**

**Fugitive Emissions from Leaks**

Number of Compressors: 4  
Annual Operating Hours: 8,760

Component	Average Number of Leaking Components <sup>1</sup> component leaks / compressor	Emission Factor <sup>2</sup> scf/hr / component	Total Emission Rate (4 compressors)				
			Total	CH <sub>4</sub> <sup>3</sup>	CH <sub>4</sub> <sup>4</sup>	CH <sub>4</sub>	VOC <sup>5</sup>
			scf/hr	scf/hr	lb/hr	ton/yr	ton/yr
Compressor Service							
Valve	0.55	14.84	32.65	30.44	1.29	5.64	2.18E-01
Connector	0.62	5.59	13.86	12.93	0.55	2.40	9.27E-02
Open-Ended Line	0.16	17.27	11.05	10.31	0.44	1.91	7.39E-02
Pressure Relief Valve	0.00	39.66	0.00	0.00	0.00	0.00	0.00E+00
Meter	0.00	19.33	0.00	0.00	0.00	0.00	0.00E+00
Non-Compressor Service							
Valve	0.60	6.42	15.41	14.37	0.61	2.66	1.03E-01
Connector	0.82	5.71	18.73	17.46	0.74	3.24	1.25E-01
Open-Ended Line	0.59	11.27	26.60	24.80	1.05	4.60	1.78E-01
Pressure Relief Valve	0.12	2.01	0.96	0.90	0.04	0.17	6.45E-03
Meter	0.01	2.93	0.12	0.11	0.00	0.02	7.83E-04
					<b>Total:</b>	20.64	0.80

1. Estimated component leaks per compressor based on average measurements throughout the Columbia pipeline system.  
Actual leaks found during quarterly surveys are as follows: 4Q17 - 1, 1Q18 - 2, 2Q18 - 2, 3Q18 - 4, 4Q18 - 14
2. Emission factors from 40 CFR 98 Subpart W Table W-3
3. CH<sub>4</sub> emission rates based on 93.25 vol% CH<sub>4</sub> in natural gas
4. Conversion based on densities of GHG as provided in 40 CFR 98.233(v)
5. Based on a 0.039 ratio of VOC to methane as calculated from gas composition.

**Columbia Gas Transmission, LLC  
Lone Oak Compressor Station**

**Solar Mars 100 - Emissions from Venting**

Number of Pneumatic Actuators:	7	per turbine
Pneumatic Actuator Vent Rate:	3	scf/hr/actuator
Number of Turbines	4	
Number of Startup/Shutdown Cycles:	50	per turbine per year
Electric Starter Emissions per Startup:	0	scf
Blowdown Emissions per Shutdown:	67,126	scf
Number of Dry Seals:	2	per turbine
Dry Seal Vent Rate:	0.5	scf/min/seal
Annual Operating Hours:	8760	

Component	Emission Rate				
	Total	CH <sub>4</sub> <sup>2</sup>	CH <sub>4</sub> <sup>3</sup>	CH <sub>4</sub>	VOC <sup>5</sup>
<b>Continuous During Operation</b>	<b>scf/hr</b>	<b>scf/hr</b>	<b>lb/hr</b>	<b>ton/yr</b>	<b>ton/yr</b>
Pneumatic Actuator (Total for number of units)	84.00	78.33	3.32	14.52	0.56
Dry Seals (Total for number of units)	240.00	223.80	9.47	41.49	1.60
<b>Intermittent During Startup/Shutdown</b>	<b>scf/event</b>	<b>scf/event</b>	<b>lb/event</b>	<b>ton/yr</b>	<b>ton/yr</b>
Electric Starter (Total for number of units) <sup>1</sup>	0	0	0	0	0.00
Blowdowns (Total for number of units) <sup>1,4</sup>	67,126	62,595	2,650	265	10.24
				<b>Total:</b>	12.41

1. Emission rates per event instead of per hour
2. CH<sub>4</sub> emission rates based on 93.25 vol% CH<sub>4</sub> in natural gas
3. Conversion based on densities of GHG as provided in 40 CFR 98.233(v)
4. Conservative estimate based on 1 blowdown per shutdown. It is not expected that a blowdown will occur after
5. Based on a 0.039 ratio of VOC to methane as calculated from gas composition



**Columbia Gas Transmission, LLC  
Lone Oak Compressor Station**

**Waukesha Emergency Generator**

Horsepower	1,175 hp
Brake Specific Fuel Consumption	7,733 Btu/Bhp-hr
Total Heat Input	9.09 MMBtu/hr
Operating Hours	500 hr/yr
Natural Gas Heat Content	1,020 Btu/scf
Fuel Consumption	4.45 MMscf/yr
	8,908 scf/hr

Pollutant	Emission Factor		Emission Rate <sup>1</sup>		Emission Factor Reference
	g/bhp-hr	lb/MMBtu	lb/hr	ton/yr	
NO <sub>x</sub>	2.00		5.18	1.30	Vendor Data
CO	1.30		3.37	0.84	Vendor Data
PM <sub>10</sub>		0.010	0.09	0.02	AP-42 Table 3.2-2 (7/00) - 4SLB
PM <sub>2.5</sub>		0.010	0.09	0.02	AP-42 Table 3.2-2 (7/00) - 4SLB
VOC	0.04		0.10	0.03	Vendor Data
SO <sub>2</sub> (Maximum Hourly)		0.0571	0.52		20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714		1.62E-03	0.25 grains S / 100 scf
Formaldehyde		0.05280	0.48	0.12	AP-42 Table 3.2-2 (7/00) - 4SLB
Total HAPs		0.07220	0.66	0.16	AP-42 Table 3.2-2 (7/00) - 4SLB

1. Emissions based on reference provided assuming operation at maximum capacity for 500 hours per year.

**Columbia Gas Transmission, LLC  
Lone Oak Compressor Station**

**Indirect-fired Heat Exchanger #1 - H1**

Heat Input 0.40 MMBtu/hr  
Operating Hours 8,760 hr/yr  
Natural Gas Heat Content 1,020 Btu/scf  
Fuel Consumption 3.44 MMscf/yr  
392 scf/hr

Pollutant	Emission Factor		Emission Rate <sup>1</sup>		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO <sub>x</sub>	100	0.098	0.04	0.17	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.03	0.14	AP-42 Table 1.4-1 (7/98)
PM <sub>10</sub>	7.6	0.007	2.98E-03	1.31E-02	AP-42 Table 1.4-2 (7/98)
PM <sub>2.5</sub>	7.6	0.007	2.98E-03	1.31E-02	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	2.16E-03	9.45E-03	AP-42 Table 1.4-2 (7/98)
SO <sub>2</sub> (Maximum Hourly)		0.0571	0.02		20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714		1.25E-03	0.25 grains S / 100 scf
Formaldehyde	0.075	0.00007	2.94E-05	1.29E-04	AP-42 Table 1.4-3 (7/98)
Total HAPs	1.89	0.00185	7.41E-04	3.24E-03	AP-42 Table 1.4-3 & 4 (7/98)

1. Emissions based on reference provided assuming operation at maximum capacity for 8,760 hours per year.

**Columbia Gas Transmission, LLC  
Lone Oak Compressor Station**

**Indirect-fired Heat Exchanger #3 - H3**

Heat Input	0.40 MMBtu/hr
Operating Hours	8,760 hr/yr
Natural Gas Heat Content	1,020 Btu/scf
Fuel Consumption	3.44 MMscf/yr
	392 scf/hr

Pollutant	Emission Factor		Emission Rate <sup>1</sup>		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO <sub>x</sub>	100	0.098	0.04	0.17	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.03	0.14	AP-42 Table 1.4-1 (7/98)
PM <sub>10</sub>	7.6	0.007	2.98E-03	1.31E-02	AP-42 Table 1.4-2 (7/98)
PM <sub>2.5</sub>	7.6	0.007	2.98E-03	1.31E-02	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	2.16E-03	9.45E-03	AP-42 Table 1.4-2 (7/98)
SO <sub>2</sub> (Maximum Hourly)		0.0571	0.02		20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714		1.25E-03	0.25 grains S / 100 scf
Formaldehyde	0.075	0.00007	2.94E-05	1.29E-04	AP-42 Table 1.4-3 (7/98)
Total HAPs	1.89	0.00185	7.41E-04	3.24E-03	AP-42 Table 1.4-3 & 4 (7/98)

1. Emissions based on reference provided assuming operation at maximum capacity for 8,760 hours per year.

**Columbia Gas Transmission, LLC  
Lone Oak Compressor Station**

**Catalytic Space Heaters**

Heat Input	0.072 MMBtu/hr
Quantity	40
Total Heat Input	2.88 MMBtu/hr
Operating Hours	8,760 hr/yr
Natural Gas Heat Content	1,020 Btu/scf
Fuel Consumption	24.73 MMscf/yr
	2,824 scf/hr

Pollutant	Emission Factor		Emission Rate <sup>1</sup>		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr (40 heaters)	ton/yr	
NO <sub>x</sub>	100	0.098	0.28	1.24	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.24	1.04	AP-42 Table 1.4-1 (7/98)
PM <sub>10</sub>	7.6	0.007	0.02	0.09	AP-42 Table 1.4-2 (7/98)
PM <sub>2.5</sub>	7.6	0.007	0.02	0.09	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	0.02	0.07	AP-42 Table 1.4-2 (7/98)
SO <sub>2</sub> (Maximum Hourly)		0.0571	0.16		20 grains S / 100 scf
SO <sub>2</sub> (Average Annual)		0.000714		0.01	0.25 grains S / 100 scf
Formaldehyde	0.075	0.00007	2.12E-04	9.28E-04	AP-42 Table 1.4-3 (7/98)
Total HAPs	1.89	0.00185	5.33E-03	0.02	AP-42 Table 1.4-3 & 4 (7/98)

1. Emissions based on reference provided assuming operation at maximum capacity for 8,760 hours per year.

# Supplemental Attachment:

## **Executive Summary**

# Executive Summary

Columbia Gas Transmission, LLC's Lone Oak Compressor Station, located in Marshall County, West Virginia is a typical natural gas compressor station which was issued Permit to Construct R13-3254 on December 7, 2015. A Class I Administrative Update was issued for the Station on December 12, 2017.

Natural gas is received from upstream compressor stations via pipelines and compressed using four (4) Solar turbine-driven compressors for transmission to a downstream station. Auxiliary equipment permitted at the station includes one (1) natural gas-fired emergency generator, two (2) process heaters, forty (40) catalytic heaters, and numerous insignificant storage tanks including two condensate storage tanks.

Per 45CFR30-4.1.a.2, a Title V application for the Station is due within 12 months after the date of commencement of operation authorized by the permit to construct. The in-service dates for the emission units at the Station are as follows:

Emission Unit ID	Unit Description	In Service Date
T01	Solar Mars 100 Turbine #1	12/22/2017
T02	Solar Mars 100 Turbine #2	8/22/2018
T03	Solar Mars 100 Turbine #3	1/3/2018
T04	Solar Mars 100 Turbine #4	12/22/2017
HTR1	Process Heater #1	12/20/2017
HTR3	Process Heater #3	12/20/2017
SH1	Comfort Heaters	12/20/2017
G1	Emergency Generator #1	12/20/2017
TK01	Condensate Storage Tank	1/1/2018
TK02	Condensate Storage Tank	1/1/2018

As described in the R13 permit application for the Station, the following federal regulations are applicable to these emission units:

- 40 CFR 60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) applies to G1.
- 40 CFR 60 Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) applies to T01, T02, T03, and T04.
- 40 CFR 60 Subpart OOOOa (Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015). This regulation is not applicable to TK01 and TK02 because potential emissions from TK01 and TK02 do not exceed 6 tons per year.
- 40 CFR 63 Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) applies to G1. G1 complies with this regulation by complying with 40 CFR 60 Subpart JJJJ.